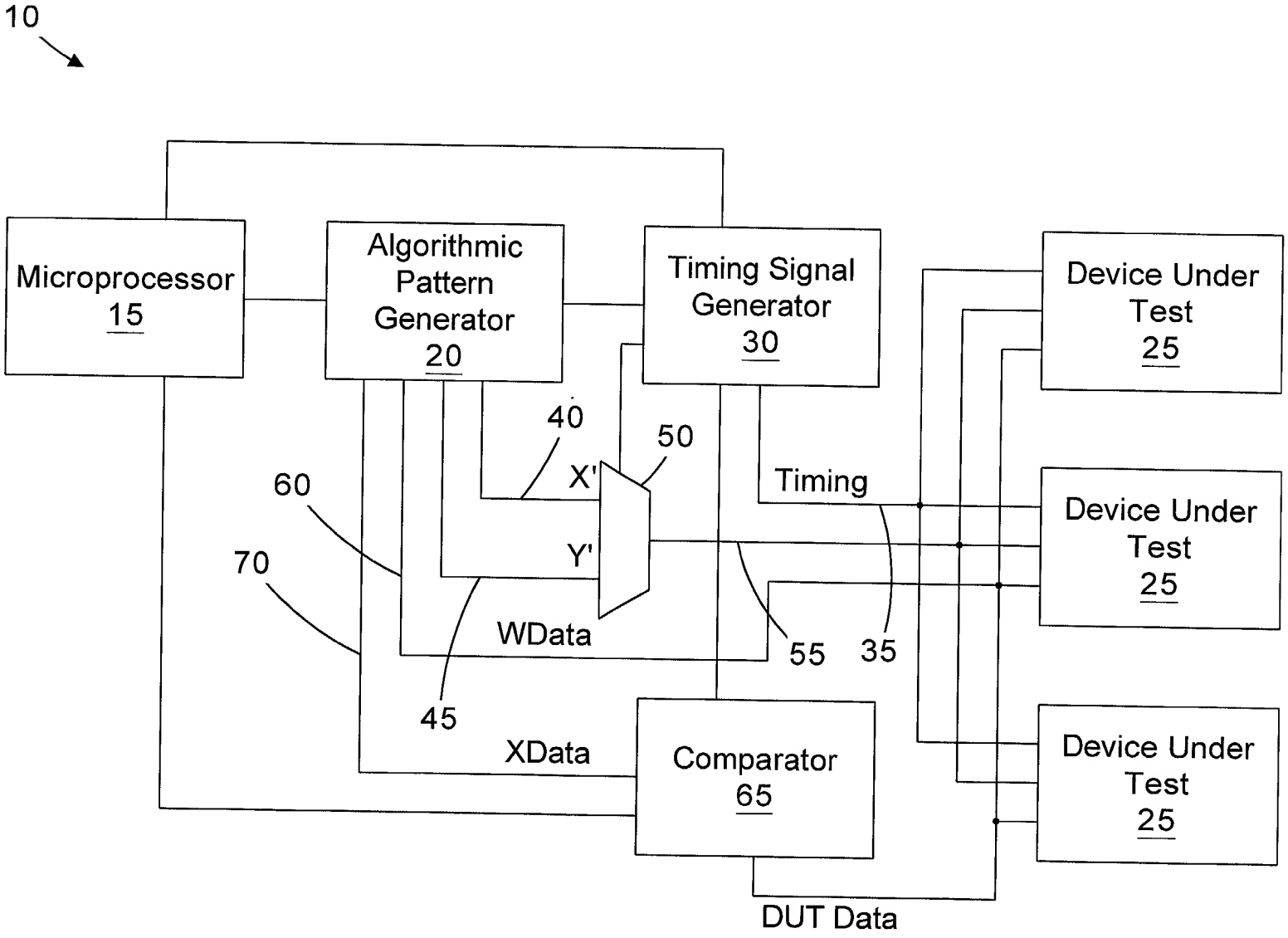
10
Microprocessor
15
Algorithmic
Pattern
Generator
20
Timing Signal
Generator
30
Device Under
Test
25
Device Under
Test
25
Device Under
Test
25
40
50
60
70
X'
Y'
Timing
WData
55
35
45
XData
Comparator
65
DUT Data

Figure 1

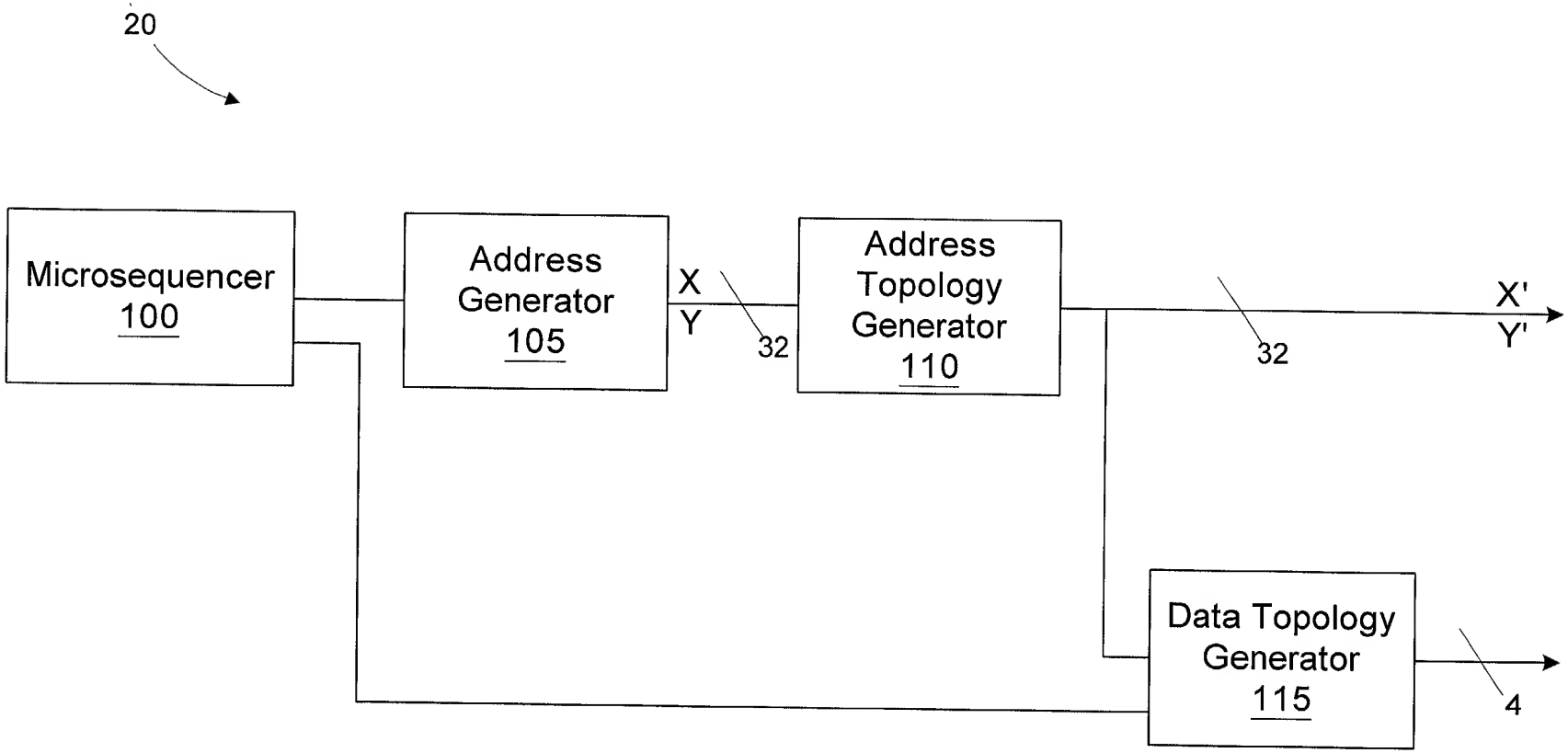
20
Microsequencer
100
Address
Generator
105
X
Y
32
Address
Topology
Generator
110
32
X'
Y'
Data Topology
Generator
115
4

Figure 2

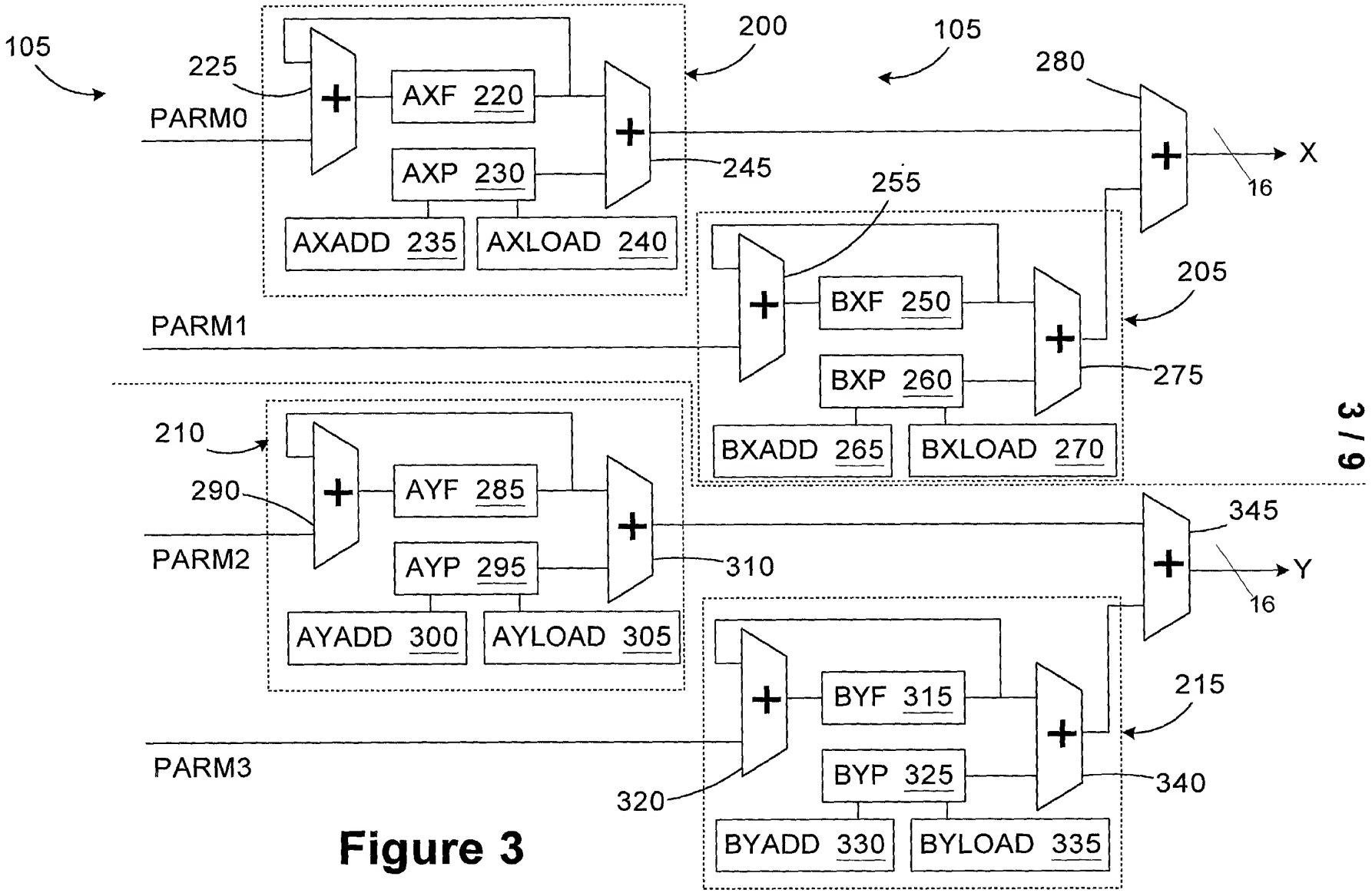
105
200
105
225
PARM0
AXF 220
AXP 230
AXADD 235
AXLOAD 240
245
280
X
16
255
205
PARM1
BXF 250
BXP 260
BXADD 265
BXLOAD 270
275
210
290
PARM2
AYF 285
AYP 295
AYADD 300
AYLOAD 305
310
345
Y
16
215
PARM3
320
BYF 315
BYP 325
BYADD 330
BYLOAD 335
340

Figure 3

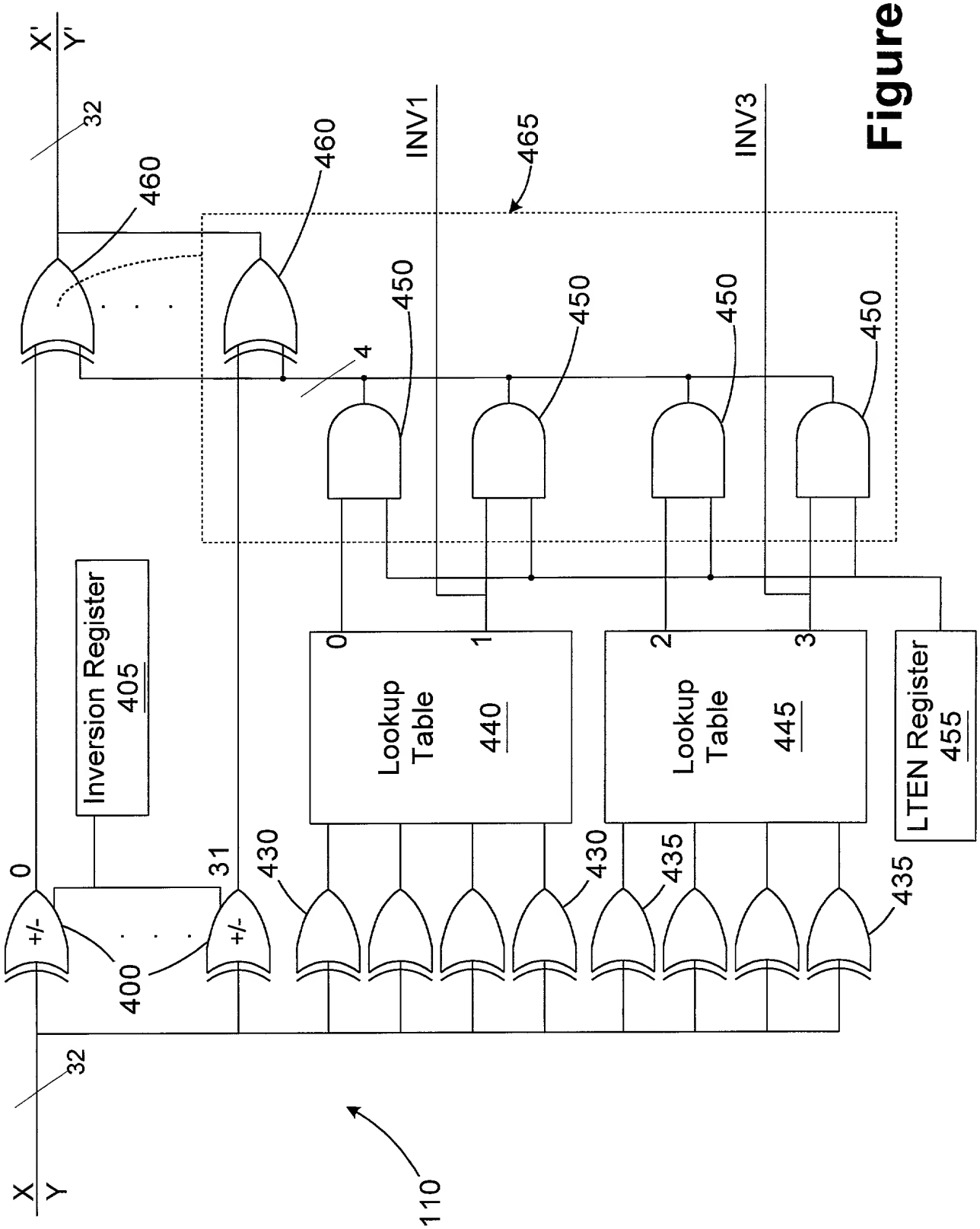
X'
Y'
32
460
460
INV1
465
INV3
450
450
450
450
4
Inversion Register
405
0
31
+/-
+/-
400
430
430
435
435
0
1
2
3
Lookup
Table
440
Lookup
Table
445
LTEN Register
455
X
Y
32
110

Figure 4A

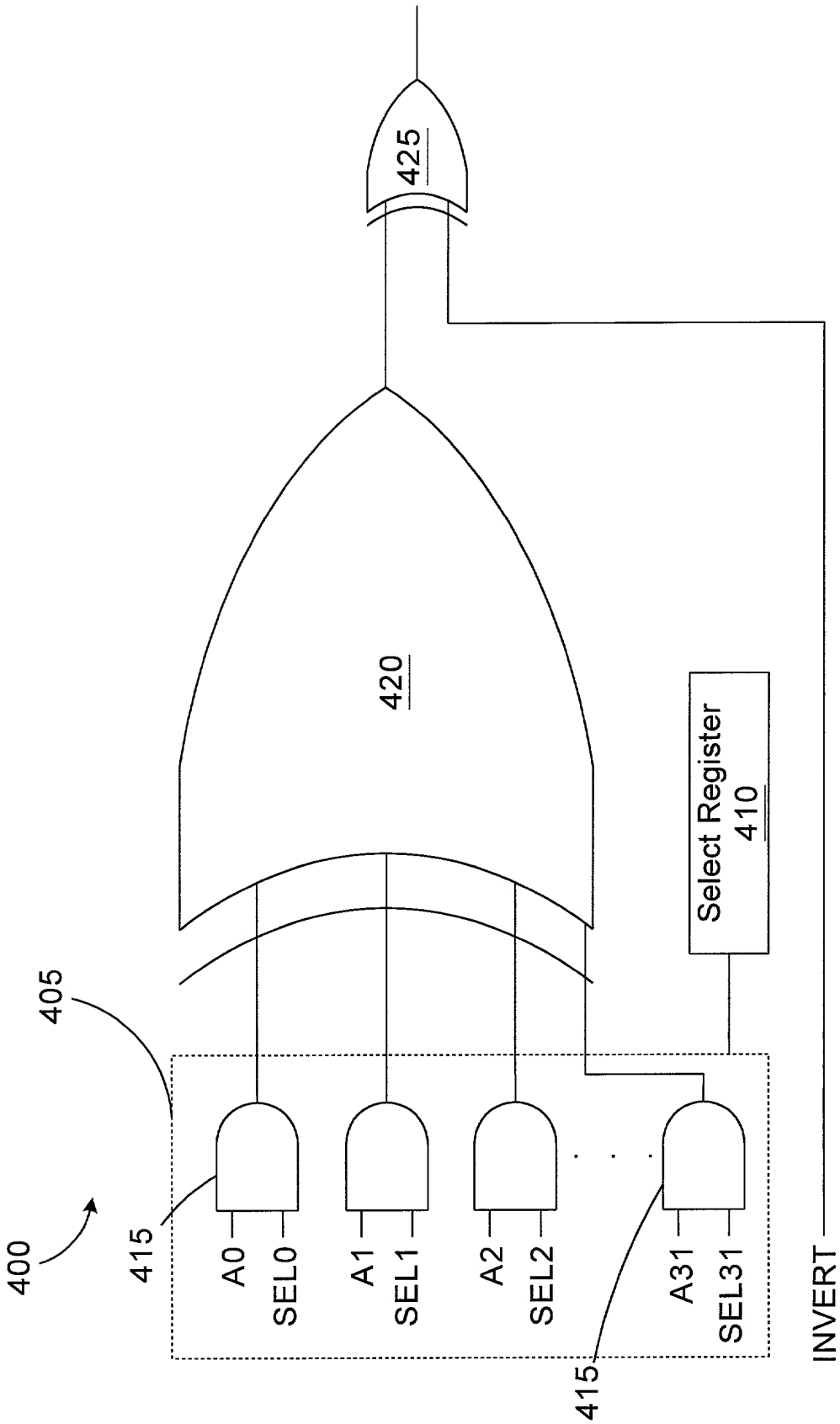
400
405
415
A0
SEL0
A1
SEL1
A2
SEL2
A31
SEL31
415
420
425
Select Register
410
INVERT

Figure 4B

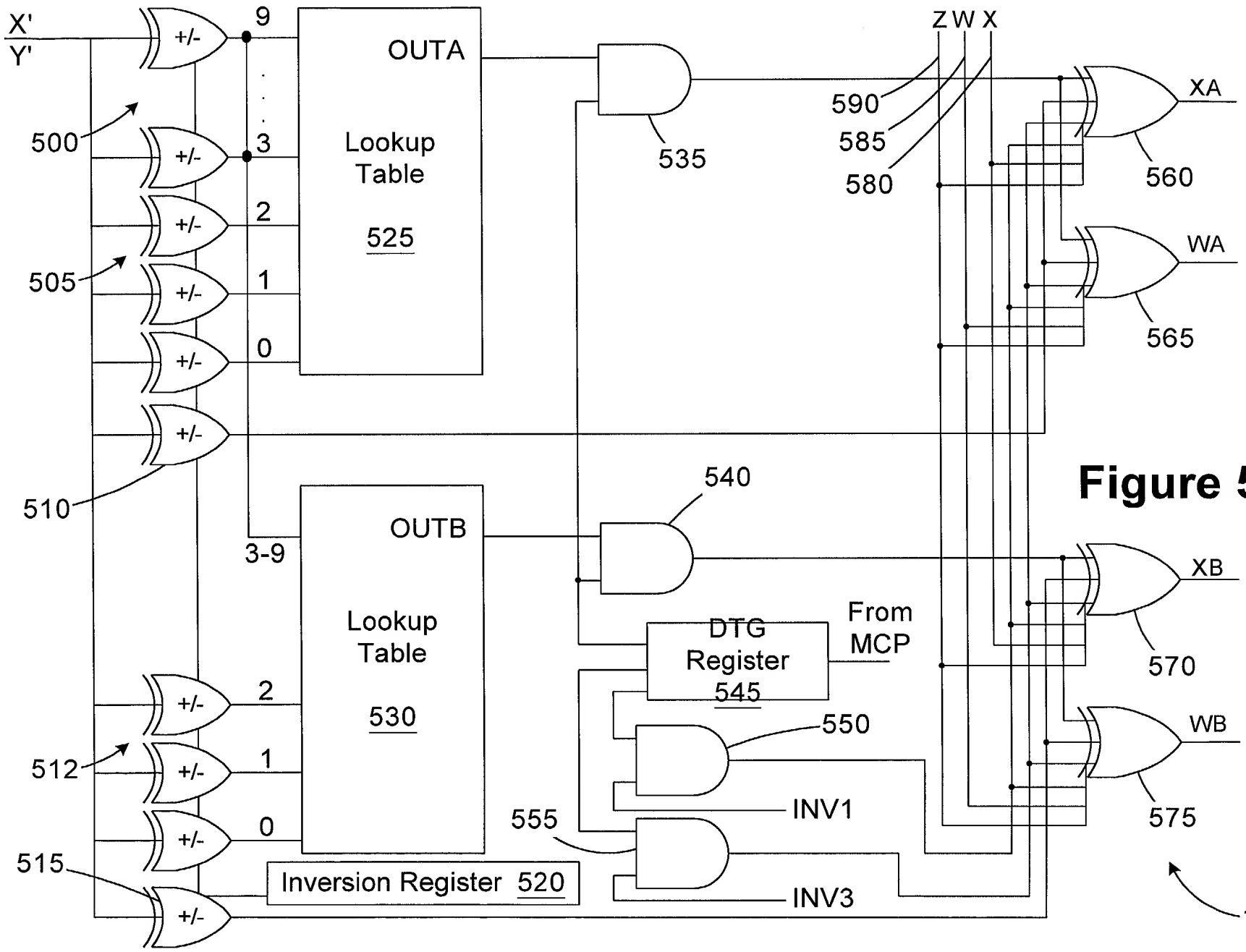
X'
Y'
+/-
9
3
2
1
0
OUTA
Lookup Table
525
500
505
510
OUTB
3-9
Lookup Table
530
512
515
Inversion Register 520
535
540
Z W X
590
585
580
XA
560
WA
565
XB
570
WB
575
DTG Register 545
From MCP
550
555
INV1
INV3
115

Figure 5

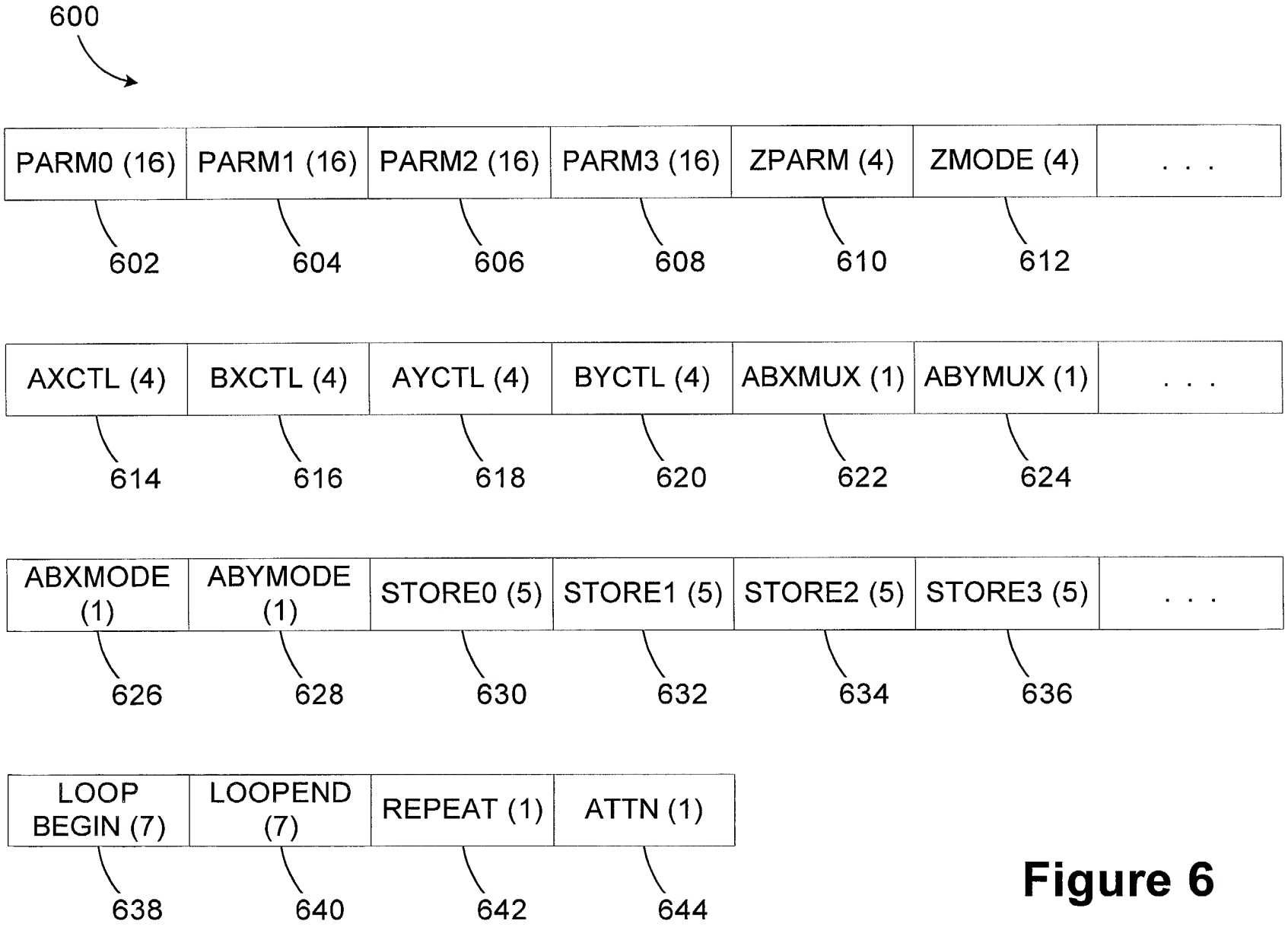
600
PARM0 (16)
PARM1 (16)
PARM2 (16)
PARM3 (16)
ZPARM (4)
ZMODE (4)
. . .
602
604
606
608
610
612
AXCTL (4)
BXCTL (4)
AYCTL (4)
BYCTL (4)
ABXMUX (1)
ABYMUX (1)
. . .
614
616
618
620
622
624
ABXMODE (1)
ABYMODE (1)
STORE0 (5)
STORE1 (5)
STORE2 (5)
STORE3 (5)
. . .
626
628
630
632
634
636
LOOP BEGIN (7)
LOOPEND (7)
REPEAT (1)
ATTN (1)
638
640
642
644

Figure 6

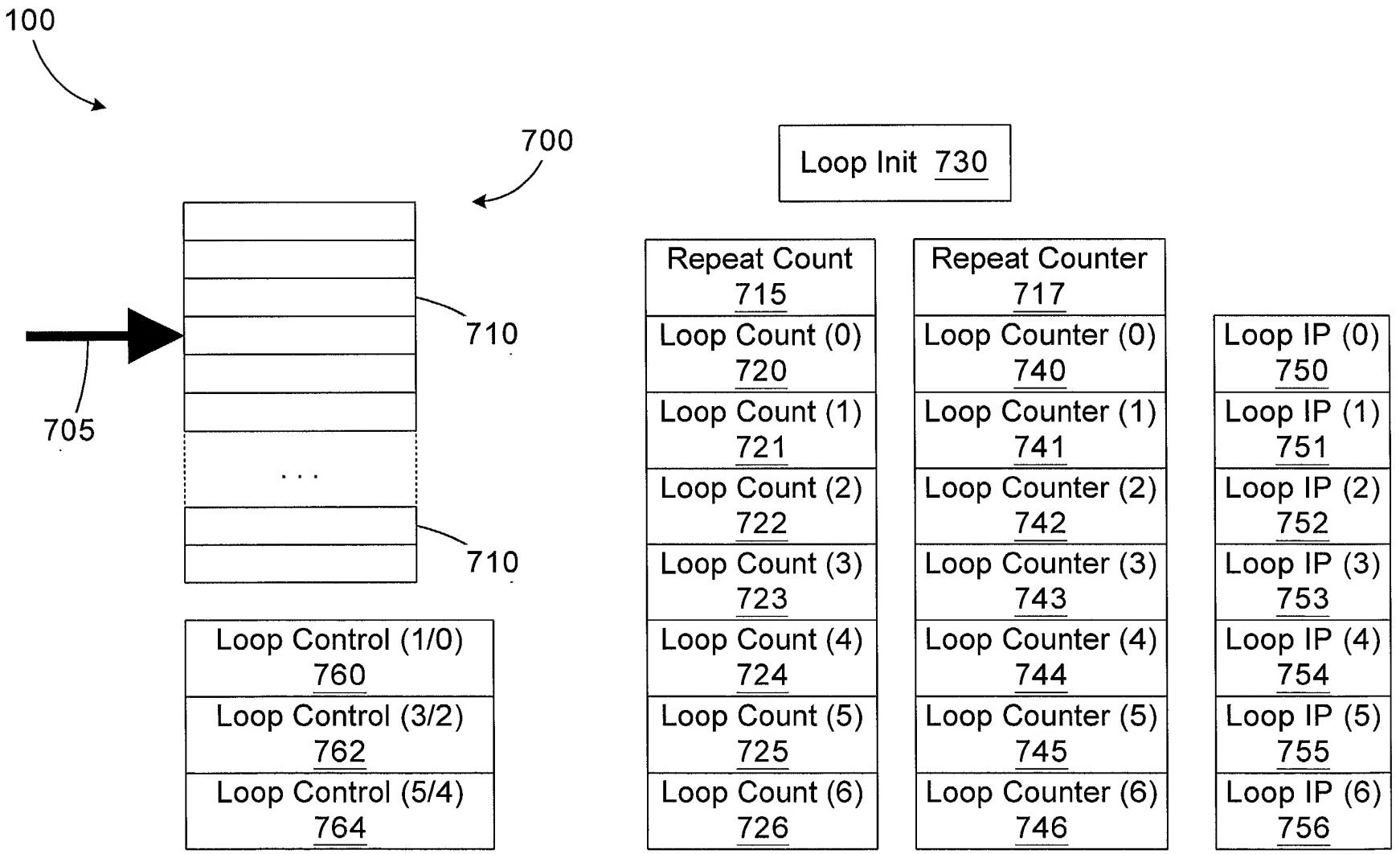
100
700
705
710
710
Loop Init 730
Repeat Count 715
Repeat Counter 717
Loop Count (0) 720
Loop Counter (0) 740
Loop IP (0) 750
Loop Count (1) 721
Loop Counter (1) 741
Loop IP (1) 751
Loop Count (2) 722
Loop Counter (2) 742
Loop IP (2) 752
Loop Count (3) 723
Loop Counter (3) 743
Loop IP (3) 753
Loop Count (4) 724
Loop Counter (4) 744
Loop IP (4) 754
Loop Count (5) 725
Loop Counter (5) 745
Loop IP (5) 755
Loop Count (6) 726
Loop Counter (6) 746
Loop IP (6) 756
Loop Control (1/0) 760
Loop Control (3/2) 762
Loop Control (5/4) 764

Figure 7

801

PARM0 602	PARM1 604	PARM2 606	PARM3 608	ZPARM 610	ZMODE 612	AXCTL 614	BXCTL 616
07FF	0000	0000	0000	0	0	2	4
0000	0000	01FF	0000	0	0	4	4
0003	0000	FFFE	0000	0	0	4	4
FFFF	0001	0001	0000	0	0	4	6

802

803

804

AYCTL 618	BYCTL 620	ABXMUX 622	ABYMUX 624	ABXMODE 626	ABYMODE 628	STORE0 630
4	4	1	0	0	0	1F
2	4	0	0	0	0	1F
6	4	0	0	0	0	11
4	4	0	0	0	0	08

STORE1 632	STORE2 634	STORE3 636	LOOP BEGIN 638	LOOP END 640	REPEAT 642	ATTN 644
1F	1F	1F	01	00	0	0
1F	1F	1F	02	00	0	0
1F	1F	1F	00	00	0	0
1F	18	1F	00	03	1	0

Figure 8